



THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 Cambridge Street, Boston MA 02114

Meeting Minutes for January 8, 2004

Members in Attendance:

Karl Honkonen	Designee, EOE
Marilyn Contreas	Designee, DHCD
Cynthia Giles	Designee, DEP
Gerard Kennedy	Designee, DAR
Mark Tisa	Designee, DFG
Mike Gildesgame	Designee, DCR
Joe Pelczarski	Designee, CZM
Richard Butler	Public Member
Gary Clayton	Public Member
Frank Veale	Public Member
Matthew Rhodes	Public Member

Others in Attendance:

Linda Marler	DCR
Michele Drury	DCR
Vicki Gartland	DCR
Steve Garabedian	USGS
Margaret Kearns	Riverways
Peter Newton	SEA
Sara Cohen	DCR
Susan Spears	WAA
Dave Harwood	Dufresne Henry
James Marshall	Plainville Water and Sewer Department
Leland Ross	Plainville Water and Sewer Commission
Katie Krause	Conservation Law Foundation
Ron Sharpin	DCR

Agenda Item #1: Executive Director's Report

Marler provided an update on the hydrologic conditions:

- December was a wet month. There was about 5.5 inches of rain in Massachusetts, overall. All regions got above normal precipitation, and the three-month composite is above normal for all regions. The current snow map shows Massachusetts with less than five inches of snow. There was a major snowstorm in first week of December, which left 10-20 inches over the state, but then temperatures warmed and this melted.
- Ground water levels: as a result of the snowmelt, ground water levels are above normal across the state.

- Streamflows during December were above normal.
- Water supply reservoirs are normal or above normal for this time of year. Some reservoirs are nearly full. It is early in the season for this situation, but this is due to all the rain received during the past 12 months.
- Massachusetts is not shown as being a drought area on any of the drought maps. It is shown as being moderately to very wet for the past 12-month period.
- The forecast is for more cold, but not much snow. The long term forecast for February, March and April is for equal chances of normal, above normal and below normal precipitation. The Weather Service says that this is because there is no strong signal for El Niño or La Niña.

Honkonen gave the Executive Director's Report:

- There is a need to reappoint or seek new public members for the Commission. Honkonen sent out a letter requesting that interested parties contact him by December 26th. He received about 10 letters of interest, as well as recommendations. He will be meeting with the Secretary to discuss the candidates recommended to be appointed or reappointed. He does not think this will happen before next month's meeting. Many existing members have expressed a desire to be reappointed and there were a number of new people who have expressed interest.
- Water policy task force: The list of members has been fine-tuned and the Governor is now reviewing it. We do not have a start date for this task force. Honkonen said that it was his intention that the WRC be fully involved in this process. Clayton asked if there were any Commission members being considered for membership on the task force. Honkonen replied that there were.

Agenda Item #2: Vote – Water Needs Forecasts for Mashpee Water District

Drury reminded the Commission that the projections were discussed last month. Increased projections are requested because demand has increased unexpectedly. The 2000 census for Mashpee was a 64% increase over the 1990 federal census. Therefore, previously used population projections, on which water use projections were based, were not accurate. The original projections resulted in water use of 1.14 mgd in 2000. Mashpee used 1.1 mgd, which is close. But 1.3 mgd was projected to be needed in 2010; the new projections predict that Mashpee will use this much by 2005. Mashpee's population is expected to increase and the service area is expected to expand, resulting in a water needs forecast of 1.9 mgd by 2020. There had been a moratorium on building in Mashpee because of the land dispute with the Wampanoag Indians, but this has now been resolved and consequentially, the population has grown.

Kennedy asked how population was projected. Drury replied that population is based on projections by regional planning agencies or MISER. The towns are consulted as to the town census. If projections need to be extrapolated or interpolated, Staff will do that. Another factor that complicates population projection for the Cape and Islands is the influx of summer residents. The towns and regional planning agencies make estimates, but these don't account for weekend guests etc. When the water needs forecasts for Cape Cod were originally developed, it was found that residential gpcd was meaningless, because it is so difficult to pinpoint summer population.

Clayton asked if the new population projection is driving this request now. Drury responded that is, as well as the increase in service area. Newton added that the increase in service area is largely due to customers, on private wells near water lines and with concerns about Mass Military Reservation, coming onto the system. Clayton wants to be sure that the model used to project demand is accurate. Drury said that this is a unique case because of the dispute with the Wampanoags. The original population projection for 2000 was 10,810. It turned out that the population was 12,946, according to the 2000 Census. The land dispute was going on about the time that these projections were developed.

V O T E	<p>Gildesgame moved with a second by Contreas to approve the Mashpee Water Needs Forecast, as presented in the December 2003 summary for the Mashpee Water District.</p> <p>The vote was unanimous of those present.</p>
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Agenda Item #3: Presentation – Staff Recommendation on Plainville’s Interbasin Transfer Application

Drury acknowledged Plainville’s representatives. The WRC accepted the application as complete in November. Since then, the analyses have been completed, the two required public hearings were held and public comments were accepted. Plainville is applying to develop the Lake Mirimichi wellfield. The Lake Mirimichi wellfield is in the town of Plainville, in the Taunton River basin. Plainville has land area in the Taunton, Blackstone and Ten Mile River basins. Water will be used in town, but wastewater is transported, treated and discharged at the North Attleborough treatment plant, which is physically located in the City of Attleboro, in the Ten Mile River basin. Water from this wellfield will cross a town line and basin line and thus is subject to ITA review. The wellfield has an approved yield of 0.4 mgd.

Plainville currently has three water supply wells on Turnpike Road in the Taunton River basin. They also have a wellfield in the Ten Mile River basin. The existing wells have high iron and manganese. Also there is a VOC threat near the Ten Mile River basin wellfield. This has caused DEP to limit the use of the wells. Plainville is also experiencing industrial contamination in other parts of town.

This proposal was evaluated against the seven applicable criteria of the Interbasin Transfer Act.

#1: MEPA The proposal received MEPA review and approval in 1998. At this time it was thought that this could be reviewed as a request for a determination of insignificance, but the City of Attleboro operates the dam at Lake Mirimichi, which flows into the Wading River which complicated the analyses. Therefore, it was suggested that Plainville request a full review. In 1998, the MEPA regulations did not require an EIR for a full interbasin transfer review. MEPA has been consulted to see if this had changed, and they said that an EIR would not be required because the project had been approved before the regulations changed. Staff recommends that this application meets this criterion.

#2: Viable in-basin sources In this case, Plainville was directed to investigate and develop all viable sources within the Ten Mile River basin. If a source were developed in the Ten Mile

River basin, it would not be subject to the ITA because wastewater is returned to the Ten Mile River basin. Plainville has spent a lot of time looking for sources throughout town, not just in the Ten Mile River basin. Based on the information available to date, there are no other local water supply sources available to the town. DEP was consulted on this and they concur. Therefore, Plainville meets this criterion.

#3: Water conservation Plainville meets all of the 1992 water conservation standards for Massachusetts. The town is in the process of completing the work needed to fully comply with the 1999 performance standards. The town currently bills large customers monthly and others are billed semi-annually. Plainville is changing over to radio frequency meters and this will allow them to bill quarterly. These meters should be in operation by the spring of this year. Plainville has developed a drought management plan and a plan to target large water users in town. These are scheduled to be approved by the Plainville Water Commission next week. Because these actions are being taken now, staff is recommending that Plainville complies with this criterion. Staff is also recommending that the town reports back to the Commission to document that these actions have been completed.

#5: Reasonable instream flow Three gravel packed wells were installed in a 30 feet deep sand and gravel aquifer. This is not a large or prolific aquifer. The wells are 250 feet away from Lake Mirimichi. DEP estimates that the safe yield of the wellfield is 0.4 mgd. Staff analyzed impacts on flow to the Wading River, Lake Mirimichi levels, wetlands, ground water levels, fisheries, recreation, and cumulative impacts. The Wading River flows out of Lake Mirimichi via a dam and through a gate valve, operated by the City of Attleboro, which allows releases from the lake into the Wading River. Wading River continues down through Mansfield, where the City of Attleboro withdraws water from an area near Blakes Pond. There is also a dam on Robinson's Pond downstream. The nearest stream gages are quite far downstream. There is a USGS gage on the Wading River downstream of Attleboro's withdrawal and there is another further downstream in Norton. The proposed withdrawal is near the areas where Mansfield and Foxborough are developing wells in the Witch Pond swamp. When the WRC reviewed the ITA requests from Mansfield and Foxborough, it was found that Lake Mirimichi feeds Witch Pond, via underflow across the divide between the Taunton and Ten Mile basins.

Staff directed Plainville to look at impacts to water levels in Lake Mirimichi. Attleboro operates the dam at Lake Mirimichi. When the City needs water downstream, the gate valve is opened. This is not Attleboro's only source of water supply. Plainville was directed to look at the period from 1990 to 2001, because data was available for this period from Attleboro to simulate flows to the Wading River. Daily flows were difficult to interpret, due to the variability caused by Attleboro's releases from Lake Mirimichi. When monthly releases were examined, it was felt that there was a reasonable hydrograph. Plainville investigated a natural condition; a condition with Attleboro's withdrawal only; a condition with both the proposed Plainville wells and Attleboro's use; and a condition with only withdrawals from Plainville. There is not a big difference in the monthly releases for all of the withdrawal scenarios under normal and moderate drought conditions. The monthly flows in cubic feet per second are consistent with aquatic base flow (ABF) ranges expected for this area under all of the different withdrawal conditions.

Water Year 2000 was close to a normal precipitation condition. There is a nice seasonal range to the hydrograph. Because Attleboro controls flow from the lake, flows in the Wading River are

highest in the summer months, when the city needs the water. The hydrograph is spiky and uneven because of Attleboro's manipulation of the gate valve at Lake Mirimichi, but Attleboro's use of Lake Mirimichi is not jurisdictional under the ITA. The flows for Water Year 1995 are seasonal, but lower. There are some flaws in the modeling because no flow measurements have been made at the dam.

Findings concerning impacts to Lake Mirimichi water levels from the proposed Plainville withdrawal:

- Manipulation of Lake Mirimichi by Attleboro is not related to Lake Mirimichi levels. Attleboro opens the gate valve when the lake level at their source downstream reaches a certain point.
- Lake Mirimichi is shallow on the northwest side (5 feet deep), but deeper on southeast side (10 feet deep).
- In a normal precipitation year, these wells (combined with Attleboro's use) would result in only 0.1 foot of drawdown. This is not very significant.
- Lake Mirimichi was drawn down by Attleboro in 1993, 1995, 1997, and 1999. The year 1995 most closely resembled a moderate drought. If Plainville was using these wells, water levels would fall before the dam sooner, remain below the dam for a longer and cause the level to decline to a lower level. This would be a significant impact.

Analysis of other environmental impacts resulted in the following findings:

- The ground water drawdown around the wells was only 3.5 feet during pumping test, and it stabilized. Drawdown near Lake Mirimichi was about 0.5 feet at a time when the lake was being drawn down for Attleboro's water supply (not significant).
- Fisheries are not expected to experience a significant impact from the proposed withdrawal.
- During the public comment period, there were comments about impacts to the shoreline around the lake, but the major impacts come from Attleboro's manipulation of lake levels. The addition of Plainville's wells, on an average year, will not significantly impact drawdown or recreation.
- There are wetlands in the vicinity of the wells, but use of the wells is not expected to impact these.
- Cumulative impacts: Lake Mirimichi is currently impacted by Attleboro. Plainville's wells are not expected to have a major impact during a normal year. During a drier year, such as 1995, additional impacts from the Plainville wells could be unacceptable, but Staff feels that this could be approved with lake level thresholds. If drawdown is held to that experienced in 1995, there would not be any additional impact caused by Plainville, and Attleboro will not be impacted by these proposed wells. Because Attleboro is not subject to the Act, the WRC does not have control over how the City operates Lake Mirimichi. With the thresholds recommended, Plainville's wells will not have an additional impact. Staff is proposing a threshold level of two feet below the top of the dam. This is consistent with the drawdown experienced in 1995.

Staff is recommending that Plainville take water measurements weekly, or the town can use water levels measured at the dam by Attleboro. When levels drop to 1.5 feet, Plainville must start taking daily measurements. At 1.75 feet, the town must decrease

well use. At two feet, the wells must be shut off and lake levels must be allowed to recover before the wells are turned back on.

- Staff is also suggesting that Plainville work with Attleboro to manage this resource.

#7: The Local Water Resources Management Plan was submitted with the application. Comments have been furnished to the Town by Staff to provide clarification on some items. The plan follows the outline approved by this Commission for these plans. The regulations state “communities and districts in the receiving area (must) have adopted or ... (be) actively engaged in developing a local water resources management plan.”, therefore, this criterion has been met. But Staff is requiring that Plainville report back to the WRC on the final plan.

#8: Cumulative Impacts One of the main concerns going into this review, expressed by the agencies and also expressed through public comments, is the stressed nature of the subbasin. Staff reviewed the inflow/outflow analysis for this subbasin, using the existing total capacities in the original inflow/outflow analysis and updating it, using the existing and proposed total capacities from the Plainville, Foxborough and Mansfield wells. The Foxborough and Mansfield wells are in the Ten Mile River basin, but the service areas for these towns in the Wading River subbasin have unsewered portions. The resultant inflow/outflow is about the same. Staff also considered the buffering capacity of Lake Mirimichi and the thresholds set. These will mitigate impacts. As a whole, Staff does not think that the addition of these wells will cause more stress on the subbasin, therefore recommend that Plainville’s proposal meets this criterion.

The public comment period ended on Dec 29th. Many comments were received that opposed this wellfield, but for reasons outside of the jurisdiction of the ITA. For the comments received that were directly applicable to jurisdictional issues under the ITA, Staff finds that the threshold will address the concerns expressed. Many comments had to do with water quality and the Water Management Act permitting process. Staff has been in touch with DEP SERO to assure that these comments will be considered under the drinking water and WMA programs. There were also many local issues raised, over which the WRC has no jurisdiction. There is another public hearing scheduled for next Thursday to take comments on this Staff Recommendation.

Staff has recommended, but cannot require, that Plainville and Attleboro work together to manage their shared water resources. Kennedy asked if we had heard from Attleboro. Drury responded that their comments were included in the attachments to the Staff Recommendation. Staff is hoping that Attleboro will cooperate with Plainville.

Clayton asked how it can be assured that the communities are talking to each other, because the WRC no one wants to end up with a situation where Plainville is pumping while Attleboro is draining. Drury replied that the Staff Recommendation included monitoring requirements, and there is a recommendation in the document that Plainville work with Attleboro to determine when Attleboro is draining Lake Mirimichi. If the communities can’t work something out, Plainville is required to develop a monitoring plan to assure that they are in compliance. Marler added that when the lake level reaches 1.5 feet from the top of the dam, Plainville must monitor daily. Clayton asked if the WRC could require Attleboro and Plainville to enter into an inter-municipal agreement. Several Commissioners agreed that Attleboro could not be required to do anything under this approval. Clayton said that there should be a clear line of communication between the communities. Drury said that it is in Plainville’s interest to do whatever they can to

work with Attleboro because this approval will require that they cannot impact Attleboro's use of the lake. Marler added that Attleboro's withdrawal is registered, not permitted, so there is no regulatory "hook" to make Attleboro do anything. Marler suggested that Attleboro and the environment would be well served if Attleboro developed a plan by which to manage all its sources, but neither the WRC nor the DEP have the authority to require it at this time. When the registration expires, DEP may have an opportunity to require Attleboro to come up with a plan, but right now, Attleboro has prior rights to use this water.

Ross said that Attleboro is undergoing transition at this time. A new mayor was just installed last week and the DPW Director and water superintendent both took early retirement. Plainville is waiting for the mayor and new DPW director to come up to speed before approaching the City about agreements. Until such time as Plainville can enter into an agreement with Attleboro, a Plainville employee can visit the dam and take the measurements. It is not an inconvenience for Plainville to do this. Marshall said they were expecting conditions on the use of the well, including a requirement that they work with Attleboro and other communities in the area. His goal is to get the well on line in order to better control the overall water supply for Plainville. Plainville is an old manufacturing community. This is the last sand and gravel aquifer available to the town.

Drury went through the conditions of the Staff Recommendation. Many are standard conditions that the WRC has required for past approvals and deal mostly with continuing to protect existing sources and continue with their water conservation program. Other specific conditions have to do with providing documentation for the approved drought plan and the program to target large users and to complete the local water resources management plan. Threshold conditions were discussed previously. Clayton suggested that the point where the measurements are made (top of the dam) should be surveyed in, in case the dam is repaired or modified. Staff will amend the recommendation to reflect this suggestion.

Staff will provide a report on the public hearing on this Recommendation. A vote will be requested in March. Marshall thanked staff for their hard work and cooperative spirit. They provided much help to the town get through this process. Honkonen requested that Plainville let the Governor know how valuable state employees were. Clayton suggested that it would be helpful to write a letter to the administration.

Agenda Item #4: Presentation – The LID Work Group and a Discussion of the Composition of the Streamflow Task Force

Garland stated that one of the ideas discussed to address the issues in the Ipswich River basin was the concept of low impact development (LID). This is actually not about development, but about more environmentally sound ways to do site design. These are storm water mitigation techniques that are aesthetically pleasing. The work group is a multi-agency group. It is developing a website to get the word out about this topic. The group also wants to develop a brochure. We've applied for an EPA watershed initiative grant for the Ipswich River basin to try to test some of these techniques. We've also applied for funding to do outreach and workshops. The main point the group is emphasizing is outreach and education, using science and research, to prove that some of these ideas are appropriate for this area. This can also be linked to Smart Growth. By the end of the fiscal year, we are hoping to have the website up and running.

Gildesgame asked whether the grants will fund demonstration projects. Gartland answered yes, the watershed initiative grant is specifically for demonstration projects in Ipswich River headwater communities. The goal is not just to implement and educate, but also to quantify and answer the question, “Do these methods actually work to infiltrate ground water?”. Clayton stated that the Ipswich basin seems like a great candidate. He hopes that the quantification aspect of this leads to useful performance standards to put into place, at least in stressed basins.

Gartland said that LID techniques cover wide range of topics, including not just landscaping and storm water, but how a community grows and how to promote development in a way that sets aside natural resource areas. The concept is to give communities the tools to grow in an environmentally sensitive manner. Clayton asked if this allows for retrofitting for older systems, and Gartland responded yes, for example, one town’s parking lot is being retrofitted with porous pavement.

Honkonen said the staff did a great job putting together the grant application. It is still several months before the status of the award will be known, but he is hopeful that this application will be selected for funding.

Gartland added that the **Streamflow Task Force** had a presentation by USGS on the habitat study, which should be completed in February. The Streamflow Task Force will set streamflow standards based on this study and previous studies. The goal is to have a presentation on the study at next WRC meeting, and later in February have a meeting of the task force to absorb the study and determine how the data will be used and how standards for the state will be developed. The task force members will be technically oriented and will consist of people that have served on the habitat groups that have been guiding the USGS studies or served on the stressed basin group. Gartland distributed a list of potential members. Giles asked if this would be primarily a technical group, to review the data. Gartland responded that the group will also make recommendation to the WRC to adopt science-based streamflow standards, based on habitat needs. Giles asked if this group will be making the decisions. No, Gartland replied. She added that the standard approach has been to negotiate numbers between various parties. This hasn’t always worked, so it was decided to make standards science based. Honkonen referred to the list of potential members and suggested that the WRC contact Gartland with names of other people that may be a good addition to the task force. Clayton said he hoped the Streamflow Task Force does not get delayed while the Secretary’s office is trying to decide on the membership of the water policy task force. This should keep moving.

Agenda Item #5: Discussion – The July WRC Retreat and Subsequent Commission Work Items

Honkonen suggested that today’s discussion focus on how the WRC sets water policy in Massachusetts and how we integrate water resources concerns with the Office of Commonwealth Development (OCD) and other agencies. How the WRC and OCD work together has been a major question since OCD was created. Honkonen has invited Gina McCarthy to talk to the WRC next month. Gildesgame said it would be helpful to hear from OCD on what their agenda is, so we have a better sense of how everything fits together. Clayton agreed, and added that it would also be interesting to this Commission to look at how our policies and standards could be

updated or modified to fit into OCD's agenda and initiatives. Honkonen referred to OCD's 10 principles for commonwealth development, and asked if it would be helpful for Staff to look at those principles to get a sense of how the WRC fits in. Drury said that this had been done for the ITA and this will be provided next month. Gildesgame said that it had also been done for OWR's work for the WRC.

Honkonen asked for comments on the WRC's interaction with other agencies. Pelczarski said the WRC deals with both floods and droughts. The drought management task force is an interagency group that the WRC works with. Clayton said the WRC needs to keep aware of the Secretary's water policy task force and asked how this initiative fits in with the WRC's statutory role. Clayton further said that the Commission should think about our partnerships with federal government agencies. This has been a valuable relationship and should be enhanced.

Pelczarski said the WRC should also consider desalinization and wastewater reuse. Veale asked how the WRC gets information from the other agencies. In Veale's organization, all the programs and agencies worked with were identified and asked about their key "care-about's". Then his organization figured out how to fit in. They found that there were more intersections than expected. His organization developed a spreadsheet to keep track of this. Veale will send this information to Honkonen. Contreas suggested that Honkonen talk to Geigis to determine how the WRC could interface with OCD.

Tisa said that it would be beneficial if to find out what exactly OCD does and what they care about relative to water policy. Gartland suggested that once the WRC knows what OCD is doing, and we should tell them what we are doing and how we think it fits into what they are doing. Then get feedback from them as to if they agree and think it is useful. Clayton suggested we look at our workplan and tell them how it meets their sustainable development principles. The WRC should take the initiative on this.

Honkonen went through the items identified at the July workshop as topics the WRC should address under their water policy responsibilities. Giles asked if these ideas that someone would like to think about, or are they things the Commission does, or should do? Should this define our work plan? Honkonen repeated that these were identified at the July workshop as topics the WRC should address under their water policy responsibilities. He asked if the WRC would like to prioritize the items. Gildesgame suggested that the WRC should look at these in terms of the work plan. How do they fit in with what are we doing and why? Can these items be incorporated into future work plans? Drury added that one of the purposes of the July retreat was to think about how the Commission could be more effective in the things it is required to do and the things it wants to do or should do. Clayton said that these items could be used to modify this year's work plan and/or develop next year's. He said that "approve the water policy task force's recommendations" should be added to the list of things the Commission is doing, because this is the statutory role of the WRC.

Meeting adjourned